

CLAIM 1. A reactive balanced modular jack device, comprising:

a circuit board having capacitive elements integrally defined therein, each of said capacitive elements comprising a plurality of plated through slots, said plated through slots being spaced and connected in a defined configuration to obtain a desired capacitance;

at least one modular jack mounted to said circuit board, said circuit board having first means for interconnecting said at least one modular jack with said capacitive elements;

at least one termination block means mounted to said circuit board, said circuit board having second means for interconnecting said at least one termination block means with corresponding said at least one modular jack and said capacitive elements; and

a panel yoke comprising:

a cover having front and back opposing surfaces and at least one aperture therethrough,

first and second opposing sides extending normally from said back surface of said plate means,

third and fourth opposing sides extending normally from said back surface of said plate means, said third and fourth sides being disposed between said first and second sides,

means for snaplockedly securing said panel yoke to a panel, and

locating means for locating said circuit board within said panel yoke and for aligning said at least one modular jack with corresponding said at least one aperture, said locating means being disposed at said first and second sides.

CLAIM 2. The device of claim 1 wherein said cover comprises:

a raised portion having an angled upper part;

an inclined portion cooperating with said raised portion to define said at least one aperture, wherein each of said at least one modular jack aligned with said at least one aperture provides for a gravity feed.

CLAIM 3. The device of claim 1 wherein said circuit board

includes a plurality of tabs extending outwardly therefrom; and

wherein said locating means comprises a plurality of channels disposed at said first and second sides, said tabs received in said channels.

CLAIM 4. The device of claim 3 wherein said locating means further comprises:

a plurality of slots through said first and second sides within said channels, said slots accepting said tabs.

CLAIM 5. The device of claim 4 wherein said locating means further comprises:

a corresponding pair of said slots formed to define resilient panels for engaging a corresponding pair of said tabs of said circuit board.

CLAIM 6. The device of claim 1 wherein said circuit board includes:

a first surface having said at least one modular jack mounted thereon; and

a second surface opposed to said first surface, said second surface having said at least one termination block means mounted thereon.

CLAIM 7. The device of claim 1 wherein said at least one termination block means comprises:

a housing having first and second spaced apart sidewalls and opposed upper and lower ends, said housing having a plurality of openings extending through said upper and lower ends;

a plurality of spaced apart insulation penetrating beam contacts disposed in said openings of said housing, said beam contacts extending between said upper and lower ends, said beam contacts at said lower end connected to said circuit board; and

a plurality of spaced apart teeth defining wire conductor retaining slots.

CLAIM 8. The device of claim 1 further comprising:

at least one door means pivotably disposed on said cover of said panel yoke at each of corresponding said at least one aperture, wherein each of said at least one door means includes a closed position precluding access to corresponding at least one modular jack and an open position providing access to corresponding said at least one modular jack.

CLAIM 9. The device of claim 8 wherein each of said at least one door means is spring biased in said closed position.

CLAIM 10. The device of claim 1 further comprising:
rear cover means attached to said panel yoke for covering said circuit board within said panel yoke.

CLAIM 11. The device of claim 1 wherein at least one of said at least one modular jack and said at least one terminal block means includes solderless connection means.

CLAIM 12. The device of claim 1:
wherein said at least one modular jack comprises first and second modular jacks;
wherein said at least one termination block means comprises first and second termination block means; and
wherein said at least one aperture of said cover comprises first and second apertures.

CLAIM 13. The device of claim 12 further including:
a dividing member extending from said raised portion to said inclined portion between said first and second apertures.

CLAIM 14. A device for use in reactively balancing connectors, comprising:

a circuit board having circuitry thereon, said circuitry comprising a plurality of pads and circuit traces; and

at least one capacitive element integrally defined within said circuit board and connected to said circuitry, said at least one capacitive element comprising a plurality of plated through slots, said plated through slots being spaced and connected in a defined configuration to obtain a desired capacitance.

CLAIM 15. A reactive balanced modular jack device comprising:

a circuit board having circuitry including a plurality of conductive through slots, said conductive through slots being arranged and connected to define at least one capacitance;

jack means disposed on said circuit board and connected by said circuitry to at least one of said conductive through slots defining said at least one capacitance; and

termination block means disposed on said circuit board and connected by said circuitry to said jack means and to at least one of said conductive through slots defining said at least one capacitance.

CLAIM 16. The device of claim 15 wherein said circuit board includes:

a first surface having said jack means disposed thereon; and

a second surface opposed to said first surface, said second surface having said termination block means disposed thereon.

CLAIM 17. The device of claim 16 wherein said termination block means comprises:

a housing having first and second spaced apart sidewalls and an upper surface having a plurality of openings therethrough;

a plurality of spaced apart insulation penetrating beam contacts disposed in said openings of said housing, said beam contacts connected to said circuit board; and

a plurality of spaced apart teeth extending from said upper surface, said teeth defining wire conductor retaining slots.

CLAIM 18. A reactive balanced electrical connector comprising:

a circuit board having circuitry including a plurality of conductive through slots, said conductive through slots being arranged and connected to define at least one capacitance;

first connector means disposed on said circuit board and connected by said circuitry to at least one of said conductive through slots defining said at least one capacitance; and

second connector means disposed on said circuit board and connected by said circuitry to said first connector means and to at least one of said conductive through slots defining said at least one capacitance.

CLAIM 19. The electrical connector of claim 18 wherein said circuit board includes:

a first surface having said first connector means, disposed thereon; and

a second surface opposed to said first surface, said second surface having said second connector means disposed thereon.

CLAIM 20. The electrical connector of claim 18 wherein said first connector means comprises a jack.

CLAIM 21. The electrical connection of claim 18 wherein said second connector means comprises a termination block.

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